

Notice of Allowability

Application No.

10/561,283

Examiner

Brendan O. Baggot

Applicant(s)

SPANGENBERG ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Interview of 12/7/07.
2. ☒ The allowed claim(s) is/are 1-2, 5-10, 14 and 17-28.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 12/7/07
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. Claims 5-6, 9-10, 12-13, 15-16 and 18-22 are hereby rejoined.

2. Claims 1-2, 5-10, 14 and 17-28 are allowed.

3. Claims 3-4, 11-13, 15-16 and 29 are cancelled.

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Verne Luckow on 12/7/07.

The Application is amended as follows:

In the Claims:

1. (Currently Amended) An isolated nucleic acid molecule comprising a sequence of nucleotides selected from the group consisting of

(a) the nucleotide sequence set forth in SEQ ID NO: 2 or 3;

[(b) a nucleotide sequence at least 100 nucleotides in length which is a complement of (a); and]

(b)[(c)] a nucleotide sequence at least 100 nucleotides in length which is a fragment [or variant] of (a) [or (b) having at least 95% identity to the part a corresponding part of SEQ ID NO: [[2 or]] 3 upon which the fragment or variant is based; and] wherein said molecule [is capable of modifying] drives pollen-specific expression.

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2. The isolated nucleic acid molecule according to claim 1 wherein said molecule [is capable of modifying] drives pollen-specific expression of an operably-linked second nucleic acid molecule.

In claim 5, line 1, "An isolated" has been replaced with - - The isolated - -.

In claim 6, line 1, "An isolated" has been replaced with - - The isolated - -.

In claim 9, line 1, "A vector" has been replaced with - - The vector - -.

In claim 10, line 1, "A vector" has been replaced with - - The vector - -.

14. (Currently Amended) A plant cell, plant, plant seed or other plant part comprising the nucleic acid molecule according to claim 1[, or the vector according to claim 7[, or the chimeric gene according to claim 11].

17. (Currently Amended) A method of modifying gene expression in pollen, said method comprising

(a) introducing into a plant cell an effective amount of the nucleic acid molecule according to claim 1, or the vector according to claim 7, [or the chimeric gene according to claim 11,] and

(b) directing pollen-specific expression of an operably-linked second nucleic acid molecule

(c) selecting a transformed plant cell containing said nucleic acid;

wherein said nucleic acid modifies gene expression in pollen.

18. (Currently Amended) A method of producing a plant with reduced male fertility compared with a wild-type plant, said method including

(a) introducing into the plant [a] the nucleic acid molecule according to claim 1 [in combination with a further] operably linked to a second nucleic acid molecule [is capable of modifying] that modulates male fertility, and

(b) selecting a transformed plant with reduced male fertility compared with a wild-type plant.

19. (Currently Amended) [A] The method according to claim 18 wherein said ~~further~~ second nucleic acid molecule [is capable of modifying] modulates pollen development.

20. (Currently Amended) [A] The method according to claim 19 wherein said ~~further~~ second nucleic acid molecule encodes bacterial ribonuclease barnase.

21. (Currently Amended) A plant produced by [a] the method according to claim 18.

22. (Currently Amended) [A] The plant according to claim 21 wherein said plant is a male sterile plant.

25. (Currently Amended) The isolated nucleic acid molecule according to claim 1 comprising a sequence of nucleotides selected from the group consisting of:

(a) the nucleotide sequence set forth in SEQ ID NO: 3:

[(b) a nucleotide sequence at least 100 nucleotides in length which is a complement of (a); and]

(b)[(c)] a nucleotide sequence at least 100 nucleotides in length which is a fragment [or variant]of (a) [or (b) having at least 95% identity to the part of SEQ ID NO: 3 upon which the fragment or variant is based] wherein said molecule [is capable of modifying] drives pollen-specific expression.

26. (Currently Amended) The isolated nucleic acid molecule according to claim 1 comprising a sequence of nucleotides selected from the group consisting of:

(a) the nucleotide sequence set forth in SEQ ID NO: 2:

[(b) a nucleotide sequence at least 100 nucleotides in length which is a complement of (a); and]

(b)[(c)] a nucleotide sequence at least 100 nucleotides in length which is a fragment [or variant] of (a) [or (b) having at least 95% identity to the part of SEQ ID NO: 2 upon which the fragment or variant is based] wherein said molecule [is capable of modifying] drives pollen-specific expression.

The above amendments were made to obviate potential issues under 35 U.S.C. § 112, first paragraph and 35 U.S.C. § 112, second paragraph.

Rejoinder

5. Claims 1-2, 5-10, 14 and 20-28 directed to an allowable product. Pursuant to the procedures set forth in MPEP § 821.04(B), claims 17-19, directed to the process of making or using an allowable product, previously withdrawn from consideration as a result of a restriction requirement, are hereby rejoined and fully examined for patentability under 37 CFR 1.104.

Because all claims previously withdrawn from consideration under 37 CFR 1.142 have been rejoined, **the restriction requirement as set forth in the Office action mailed on 3/12/07 is hereby withdrawn.** In view of the withdrawal of the restriction requirement as to the rejoined inventions, applicant(s) are advised that if any claim presented in a continuation or divisional

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application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once the restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brendan O. Baggot whose telephone number is 571/272-5265. The examiner can normally be reached on Tuesday through Thursday, 10:00 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on 571/272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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SUPERVISORY PATENT EXAMINER